



## OpenVMS version 8.3-1H1 frequently asked questions (FAQs)

#	Question	Response
1	What's new in this version	Pointer to new features/benefits chart
2	What changes will be required of applications in going from OpenVMS v8.2-1, v8.2, or 8.3 to OpenVMS v8.3-1H1?	OpenVMS v8.3-1H1 includes no changes that will require updates to applications that have been qualified on v8.3.
3	I have a cell-based Integrity server (running HP-UX, Linux, Windows) today. Can I run OpenVMS on it?	<p>In general, you should be able to load OpenVMS in one or more partitioned cells. However, it is important to check to be sure of system compatibility. Earlier versions of HP Integrity servers do not support OpenVMS.</p> <p>However, the newest line of HP Integrity servers and all planned HP Integrity servers do and will support OpenVMS.</p> <p>You can also load OpenVMS v8.3 or later on an HP Integrity server partition with which certain HP 9000 PA-RISC-based servers are upgraded. There are some specific requirements before this can be done. More information can be found in the white paper, <a href="#">HP Superdome Hybrid Servers</a>.</p> <p>This capability is particularly effective and efficient in implementing consolidation initiatives.</p>
4	I have an HP Superdome server based on the PA-RISC microprocessor to which I plan to add one or more HP Integrity cell boards. Will I be able to run OpenVMS on it?	<p>You can load OpenVMS v8.2-1 or later on an HP Integrity server partition with which certain HP 9000 PA-RISC-based servers are upgraded. There are some specific requirements before this can be done. More information can be found in the white paper, <a href="#">HP Superdome Hybrid Servers</a>.</p> <p>This capability is particularly effective and efficient in implementing consolidation initiatives.</p>
5	What platforms does OpenVMS v8.3-1H1 support?	OpenVMS v8.3-1H1 supports all current HP Integrity servers. Additional detail on version support is in the following chart:

### Current OpenVMS versions by server

Server	OpenVMS version
HP Integrity rx1620 Server	8.3-1H1, 8.3, 8.2-1
HP Integrity rx2620 Server	8.3-1H1, 8.3, 8.2-1
HP Integrity rx2660 server	8.3-1H1, 8.3HP
HP Integrity rx3600 Server	8.3-1H1, 8.3
HP Integrity rx4640 Server	8.3-1H1, 8.3, 8.2-1
HP Integrity rx6600 Server	8.3-1H1, 8.3
HP Integrity rx7620 server	8.3-1H1, 8.3, 8.2-1
HP Integrity rx7640 Server	8.3-1H1, 8.3
HP Integrity rx8620 server	8.3-1H1, 8.3, 8.2-1
HP Integrity rx8640 Server	8.3-1H1, 8.3
HP Integrity Superdome	8.3-1H1, 8.3, 8.2-1
HP BladeSystem c-Class BL860c	8.3-1H1, 8.3 plus patch kit
All HP AlphaServer systems	8.3, 8.2

For a complete description refer to the [OpenVMS v8.3-1H1 Software Product Description](#).

<p>6 What new Blades management capabilities are available?</p>	<p>OpenVMS 8.3-1H1 supports an extensive range of Blades management tools based on HP corporate Systems insight Manager (SIM). A whole new family of software providers enables system managers to interrogate components of Blades such as CPU, memory, Management Processor etc. Moreover, the provisioning feature delivers the ability to Load OpenVMS onto a blade with one click from inside the HP SIM GUI interface. The rx2660, rx3600 and rx6600 Integrity systems also benefit from these new capabilities with this release.</p> <p>The use of SIM (which is free) ensures a common management interface or ‘pane of glass’ to virtually every HP server, reducing management training effort and complexity.</p> <p>For more information please read the white paper, <a href="#">HP OpenVMS on HP Integrity server blades for HP BladeSystem c-Class</a></p>
<p>7 How is HP OpenVMS for Integrity servers offered?</p>	<p>OpenVMS version 8.3-1H1, like version 8.3 before it, simplifies software procurement, installation and management with pre-packaged Operating Environments (OEs). The OEs provide the most popular software products in packages that are simple to order, use, and maintain. Choose the OE that meets your business needs:</p> <ul style="list-style-type: none"> <li>➤ <b>OpenVMS Integrity server Foundation Operating Environment (FOE)</b> delivers manageability and interoperability features. It is an Internet-ready, feature-rich solution for the price-sensitive customer. Customers have been requesting low-cost OpenVMS solutions for some time. With the new Foundation OE, OpenVMS computing is significantly more cost-effective.</li> <li>➤ <b>OpenVMS Integrity server Enterprise Operating Environment (EOE)</b> includes all the components of the Foundation OE, plus tools that enhance the customer experience in the areas of manageability, single system availability, and performance.</li> <li>➤ <b>OpenVMS Integrity server Mission Critical Operating Environment (MCOE)</b> includes all the Enterprise OE components, and adds features for the best possible performance, reliability, and availability. If uptime is all-important to your business, this is the OE for you.</li> </ul> <p>The business practices for OpenVMS v 8.3 on AlphaServer systems will remain the same as they have been.</p> <p>The complete description of OpenVMS v8.3-1H1 can be found in the <a href="#">OpenVMS v8.3-1H1 Software Product Description</a> document.</p>
<p>8 What is the licensing policy for the Operating Environments and Layered Products for</p>	<p>OpenVMS on HP Integrity servers software is licensed on a per core <i>licensing</i> (PCL) basis. PCL is a straightforward way to price software according to the number of processor cores on which it</p>

OpenVMS?	<p>is running. PCL licensing is available for all HP-UX 11i and OpenVMS Operating Environment software and for the majority of HP-UX 11i and OpenVMS Layered Products. This method of licensing software supports the granularity needed for virtualization.</p> <p>Customers only need to purchase software and processors as necessary for their computing tasks. Our virtualization licensing policy lets customers pay for just the amount of computing resources they need and per core licensing offers the necessary level of granularity. More processors and more per core licenses can easily be added later if needed.</p>
<p>9 What are the new flexible policies called iCAP, TiCAP, and PPU that are now available with HP OpenVMS version 8.3-1H1?</p>	<p>As part of its virtual server environment (VSE), HP has enabled the following three flexible licensing programs that are available in OpenVMS on HP Integrity servers with the release of OpenVMS version 8.3-1H1. By employing one or more of these capabilities (as appropriate) users may achieve both increased available headroom when needed and a reduced total cost of having that headroom readily accessible.</p> <ul style="list-style-type: none"> <li>➤ <b>Instant Capacity (iCAP)</b> systems are purchased with at least one active and a number of deactivated iCAP CPUs, costing 25% of an active CPU, that may be permanently turned on when required. The corresponding number of OpenVMS xOE licenses must be purchased at the appropriate time for all active CPUs</li> <li>➤ <b>Temporary Instant Capacity (TiCAP)</b> licenses temporarily activate iCAP CPUs for as long as the customer specifies. Upon activation the license for the OE installed on each TiCAP CPU is automatically granted.</li> <li>➤ <b>Pay-Per-Use (PPU)</b> systems are leased through HP Finance and all OE licenses on active CPUs are funded by the monthly leasing agreement.</li> </ul> <p>Additional information on virtualization can be found in the white paper, <a href="#">Virtualization and HP OpenVMS</a>.</p>
<p>10 My application runs on a VAX system today. How do I get to HP Integrity servers?</p>	<p>Porting applications from VAX systems to Integrity servers will involve work similar to what would have been done to port applications from VAX systems to AlphaServer systems. Although the port of most VAX system applications to AlphaServer systems, and now to Integrity servers, is fairly straightforward, there are certain architectural differences in the platforms that require changes to the applications. The key areas that involve differences are data alignment, H_FLOAT data types, data granularity, page sizes, and exception handling. HP recommends that you refer to the <a href="#">Migrating an Application from OpenVMS VAX to OpenVMS Alpha</a> book and apply the recommendations from that book as you port your applications from VAX systems to Integrity servers. In addition, HP recommends that you review the white paper, <a href="#">Making the</a></p>

[transition from HP OpenVMS VAX to HP OpenVMS on Integrity servers.](#)

A complete set of [Transition Modules](#) are available for use in transitioning applications to OpenVMS for HP Integrity servers from both AlphaServer and VAX systems.

[HP Services](#) stands ready to assist you in this endeavor.

In addition, please refer to FAQ#28 below for information on clustering VAX systems with Integrity servers *for development purposes only*.

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| 11 | How can I find out the status of my third party application porting to OpenVMS?                         | <p>There are now well over 1,000 ISV applications qualified and being sold for OpenVMS on HP Integrity servers. In addition, many more are currently being ported, tested, and made ready for production use. Many of these are new to OpenVMS, thus extending the reach of HP OpenVMS.</p> <p>Every day more applications are being ported to OpenVMS for Integrity servers. For the latest status please go to the <a href="#">HP OpenVMS Application Status Report</a>.</p> <p>We have a number of programs that are designed to help your application provider understand the value of porting to Integrity servers and for helping them to do so. HP strongly recommends that our customers work closely with their application providers to ensure that the application providers are fully aware of your needs and requirements with respect to porting their applications to OpenVMS for Integrity servers. If you have concerns about a particular software provider, please <a href="#">send us a note with</a> "ISV CONCERN" in the subject line.</p> |
| 12 | What are the plans (roadmap) for OpenVMS from here on?  | <p>We publish a 5-year rolling roadmap, which is available on the OpenVMS Web site. To view it, visit the <a href="#">HP OpenVMS Rolling Roadmaps</a>.</p> <p>The roadmap is usually updated every three months. Generally, a new version of OpenVMS is released every 12 to 18 months.</p>  |
| 13 | Can I trade in my existing VAX system and AlphaServer system licenses for HP Integrity server licenses? | <p>We have introduced an exciting new Industry leadership cross-platform license trade-in policy. Customers may trade in their existing OpenVMS AlphaServer or VAX licenses toward the purchase of new OpenVMS on Integrity server licenses. For licenses under support (the product has rights to new versions under their support contract), they can be traded in for a new license for the equivalent product at no charge.</p> <p>The customer must commit to continue support for the new licenses.</p> <p>Customers who do not currently have support service (the product has no rights to new versions under their support contract), can trade in their current OpenVMS on VAX systems or AlphaServer systems software licenses for new licenses for 40</p>  |

percent of the new license list price, provided the customer purchases a one-year, pre-paid software support contract.

When a system is being traded in and the customer is setting up a new environment, HP allows a parallel usage period of the hardware. Parallel usage of software licenses is allowed for the period of time during which the customer migrates their environment.

Information on license transfer can be found at [Information and Policies for Alpha and VAX systems](#).

14	Where can I find more information on the services that HP provides for OpenVMS?	HP Services offers a substantial portfolio specifically for <a href="#">OpenVMS</a> . <a href="#">These can be found at the HP Services Web site</a> .
15	Will all HP Layered Products for OpenVMS on AlphaServer systems be available on OpenVMS for HP Integrity servers?	<p>Most OpenVMS layered products have been, or will shortly be, ported to OpenVMS for Integrity servers. However, a small number of layered products are being retired or put into maintenance mode, and are not being ported to Integrity servers.</p> <p>For a complete status list of all layered products, see the <a href="#">Software Public Rollout Reports for OpenVMS</a>.</p>
16	How do processors and cores compare performance-wise on AlphaServer systems versus HP Integrity servers with dual-core processors?	<p>We have found that the newest HP Integrity servers with dual-core processors tend to perform considerably better than comparable AlphaServer systems.</p> <p>However, as is the case with all performance comparisons, results will be highly dependent on application, workload, configuration, and other variables. HP recommends that you test your applications on a variety of appropriate HP Integrity servers and AlphaServer systems so that you will be better prepared to make the right choice.</p> <p>For more detailed information, please refer to our performance comparison white paper, <a href="#">HP OpenVMS on HP AlphaServer and HP Integrity systems</a>.</p>
17	I am having difficulty finding OpenVMS resources. What can I do?	A wide variety of options exist for organizations that are seeking OpenVMS resources. <a href="#">HP Managed Services</a> has a vast store of resources to assist you, whether you are looking for a single OpenVMS resident expert, full outsourcing, or something in between. In addition, a worldwide network of user groups that maintain lists of experts can be found through <a href="#">Encompass</a> .
18	What kind of partitioning support is provided?	<p>Hard Partitioning is available and behaves exactly like OpenVMS Alpha hard partitions.</p> <p>Soft Partitioning as available with OpenVMS Alpha Galaxy is not currently available with OpenVMS 8.3-1H1 Integrity. This capability will be forthcoming with the introduction of HP Integrity Virtual Machines (HPVM) in a subsequent release of OpenVMS Integrity. It is currently planned for 2009.</p>
19	I ported my UNIX® applications to OpenVMS. Will there be any difference when	If you have already ported your UNIX® application to OpenVMS on AlphaServer systems, moving it to OpenVMS on HP Integrity servers is straightforward and not likely to be any different than

porting to OpenVMS on HP Integrity servers?

moving any other OpenVMS applications from AlphaServer systems to Integrity servers.

Inherent in OpenVMS for Integrity servers is the same UNIX® portability capability that is available on OpenVMS for AlphaServer systems. UNIX® applications can be ported to Integrity servers with essentially the same effort that would be required to move a UNIX® application to OpenVMS AlphaServer systems.

We continue to enhance our UNIX portability capabilities.

20 Can I do a board swap to upgrade my AlphaServer system to an HP Integrity server?

No. AlphaServer systems and Integrity servers are different architectures. However, we have a broad variety of programs that are designed to help you make the transition when your plans call for doing so. At the same time, keep in mind that your current AlphaServer system and your new Integrity server will cluster together seamlessly, thus preserving and enhancing your investment.

For more information, visit the [Customer Assurance program](#) page.

21 How well will my applications perform on Integrity servers as compared with my AlphaServer system environment?

Recently, HP engineers ran tests to compare the performance of applications running on OpenVMS AlphaServer and OpenVMS Integrity server systems. In addition, customers are now testing their applications on HP Integrity servers running OpenVMS in the [HP OpenVMS Customer Lab](#).

The results of these tests strongly indicate that OpenVMS users can obtain substantial performance improvements on the Integrity server platform. Moreover, as OpenVMS itself continues to undergo investment and enhancement, the changes in the operating system can also enhance application performance. These platform improvements—coupled with the price/performance benefits of Integrity systems and the proven high value of OpenVMS—provide a convincing argument for choosing these products for the next generation of your server infrastructure.

For more detailed information, please refer our performance comparison white paper, [HP OpenVMS on HP AlphaServer and HP Integrity systems](#).

22 I don't have the source code for an application that is critical to my environment. Will a translator or emulator be available?

A binary translator is available to address this situation. The HP OpenVMS Migration Software for Alpha to Integrity Servers (OMSAIS) product converts AlphaServer system executables to Integrity server executable code. OMSAIS translates almost all user mode images. Although some manual conversion is usually required, most of the code is translated automatically. For more information, please visit the [HP OMSAIS home page](#).

HP OMSAIS provides the following functionality:

- Translation of executables and shareable OpenVMS AlphaServer system images into functional equivalent images that run on Integrity servers.
- A run-time environment for translated image execution which also includes a way to run old code that was not discovered (or did not exist) at translate time. This run-time environment is packaged as an integral part of OpenVMS on Integrity servers.
- Open-ended translation of almost all user-mode images (including images created by DECmigrate) from the AlphaServer system to the Integrity server. The translated binary images execution environment contains a fallback interpreter for both AlphaServer system and VAX system code, which will also support optional reproduction of subtle old-architecture details.
- Supports interoperability between Integrity-native and translated images.
- Provides explicit messages that state reasons with code change recommendations where feasible if translation is not possible.
- Supports the following run-time libraries:
  - DEC C/C++ runtime libraries for OpenVMS on AlphaServer systems
  - VAX C runtime libraries for OpenVMS on VAX systems
  - FORTRAN runtime libraries
  - COBOL runtime libraries
  - PASCAL runtime libraries
  - Mathematical libraries
  - Relevant system run-time libraries

HP OMSAIS limitations:

HP OMSAIS applies the following restrictions to applications represented in AlphaServer system-native binary code that will be translated to code for Integrity servers:

- Only user-mode applications
- No privileged or undocumented AlphaServer system instruction
- No self-modifying or other dynamically generated code, which will be handled in simulator mode on the fallback interpreter for AlphaServer system code
- No system memory space reference
- No use of undocumented interfaces into the operating system.
- No user-written system services
- No applications that use DECWindows/X-Windows graphical user interface will be supported.
- No applications written in Ada or PL/1

<p>23 I have non-IEEE floating point binary data stored on disk that will need to be accessed by my applications on HP Integrity servers. Since HP Integrity servers only supports IEEE floating point operations, will I need to convert all of my data?</p>	<p>Compilers from HP support non-IEEE formats and will automatically convert the data as needed at runtime when applications are compiled using the appropriate floating point "switch". If performance is crucial you may want to convert all of your non-IEEE floating point data to IEEE in order to avoid the necessity for runtime conversion.</p> <p>For more information, see the <a href="#">OpenVMS floating point whitepaper</a>.</p>
<p>24 Some of my applications are written in AlphaServer system assembler (MACRO-64). What do I do?</p>	<p>HP recommends that you convert your AlphaServer system assembler code to C. If you must write part of your application in Assembler you will need to convert your AlphaServer system assembler code to Integrity server assembler code.</p>
<p>25 Some of my applications are written in PL/1. Will they port to OpenVMS for HP Integrity servers?</p>	<p>HP no longer owns the PL/1 compiler, and therefore did not port the PL/1 compiler to the Intel® Itanium® processor family. HP recommends that customers and partners convert their applications from PL/1 to some other language if they wish to compile and execute those applications on the Itanium processor family. HP's Consulting and Integration Services organization can provide services for translating PL/1 applications to some other language. Please contact your HP Account Manager for additional information. In addition, there are a number of commercially available converters on the market today.</p>
<p>26 I currently run several 32-bit applications on VAX systems. Will there be any emulation mode to run VAX system applications on Integrity servers? If not, what is my solution? I prefer not to go from VAX system code to AlphaServer system code and then to HP Integrity server code.</p>	<p>HP recommends that you first review our white paper, <a href="#">Making the transition from HP OpenVMS VAX to HP OpenVMS on Integrity servers</a>.</p> <p>You have two options for getting your VAX system code to Integrity servers.</p> <ul style="list-style-type: none"> <li>• Port VAX system code directly to Integrity servers.</li> <li>• Translate your code. (It is a two step process to translate the images, but it only has to be done one time.)</li> </ul> <p>If you do not have the sources you can use HP OpenVMS Migration Software for VAX to Alpha Systems [(OMSVA), also known as <a href="#">DECmigrate</a>] to port to AlphaServer systems, and then use HP OMSAIS to port to Integrity servers. An AlphaServer system is only required to create an image that will be used with the binary translator. Therefore, your options to avoid purchasing an AlphaServer system just for this purpose are:</p> <ul style="list-style-type: none"> <li>➤ Rent an AlphaServer system.</li> <li>➤ Use one of the AlphaServer systems deployed elsewhere in your organization.</li> <li>➤ Engage HP Services.</li> </ul> <p>For more information about OMSVA, please visit the <a href="#">HP OMSVA home page</a>.</p> <p>If you have the sources and you want to port your VAX applications to Integrity servers read <a href="#">Migrating an Application from OpenVMS on VAX systems to AlphaServer systems</a>. Although this document does not address porting to Integrity servers, much of what was required to port an application from</p>



VAX systems to AlphaServer systems will also apply when porting an application from VAX systems to Integrity servers.

Please note, there is no requirement to convert a 32-bit application to 64-bit. 32-bit applications will run on OpenVMS on Integrity servers.

A complete set of [Transition Modules](#) are available for use in transitioning applications to OpenVMS for HP Integrity servers from both AlphaServer and VAX systems.

27 What threads interfaces does OpenVMS on HP Integrity servers support?

OpenVMS supports four threads interfaces: D4, 1C, CMA, and TIS. Although all four of these interfaces are supported on Integrity servers, we strongly recommend that you use the POSIX 1C interface as the other interfaces are provided for backward compatibility.

If you have written your own threading or context switching packages, HP recommends that you utilize the KP features available for OpenVMS on HP Integrity servers. For more information, see [Documentation in presentation form for KP services as they apply to OpenVMS on Integrity servers.](#)

28 What server architectures are supported in OpenVMS mixed-architecture clusters?

OpenVMS fully supports mixed-architecture clusters for AlphaServer systems and Integrity servers.

Support of a VAX server with an Integrity server system in a mixed-architecture cluster (with or without AlphaServer systems included) is not a formally supported configuration for production environments. This type of configuration, however, can be used temporarily as an interim step for the purposes of development and migration, as applications are moved from VAX to either an AlphaServer or Integrity server platform. Should a problem arise while using this type of configuration, the customer will be advised to either revert back to their VAX-AlphaServer cluster environment, or remove the VAX from the cluster that contains Integrity server systems.

OpenVMS will also continue to support mixed architecture clusters of VAX systems and AlphaServer systems.

29 How can HP help me to integrate HP Integrity servers into my current AlphaServer OpenVMS environment?

In general, this can be as straightforward as adding a new node to an already existing AlphaServer system cluster, except the node is an Integrity server. The current versions of HP OpenVMS support mixed-architecture clusters consisting of AlphaServer systems and Integrity servers.

Information on license transfer can be found at [Information and Policies for Alpha and VAX systems.](#)

Most applications will require only recompile, re-link, test, and go.

HP also has a variety of resources to assist you. As part of the [Alpha RetainTrust program](#), HP provides a set of complementary

services to help you ensure that your transition occurs smoothly. For example, we and many of our business partners provide consulting services that offer various levels of depth and breadth of transition planning services. These services, such as Transition Consulting Workshops and Customer Consultancies include consultations with experts who can provide you with implementation guidance and recommendations specific to your environment and circumstance.

In addition, HP provides documentation in the form of guides, checklists, white papers, and more, to help with your planning efforts, as well as associated tools and methodologies to assist with your transition. Most of the tools can be found at the following URLs:

- » [Customer Assurance program.](#)
- » [Complimentary services](#)

30 Will all of the operating system features on which I've come to rely in OpenVMS for AlphaServer systems be available on HP Integrity servers?	YES. We delivered a full port of the operating system beginning with version 8.2. Therefore, all of the non-hardware-dependant features from clustering to security to UNIX® portability to scalability, and more that were available on OpenVMS on AlphaServer systems prior to porting to HP Integrity servers, are available on HP Integrity servers.
31 Does HP offer advanced training on OpenVMS?	Yes, HP has a comprehensive set of courses that start at the beginning and move towards advanced knowledge of OpenVMS. In particular, we offer two courses that cover the new versions of OpenVMS (Technical Updates and Internal Differences). For more information, see <a href="http://www.hp.com/learn/openvms">www.hp.com/learn/openvms</a> .
32 Does HP offer programming courses on OpenVMS?	Yes, HP has a comprehensive set of courses covering programming topics. These courses are typically offered in private classes according to customer demand. More information on the programming curriculum can be found on <a href="http://www.hp.com/learn/openvms">www.hp.com/learn/openvms</a> . To request a private class, select your country from the drop-down menu and contact HP in your country.
33 Why should I take OpenVMS training from HP?	<ul style="list-style-type: none"> <li>• <b>Deep knowledge</b>—We develop OpenVMS, we design its functionality, and we control its evolution. As a result, you benefit from access to the best experts available.</li> <li>• <b>Timing</b>—You have immediate access to the latest and greatest enhancements in OpenVMS.</li> <li>• <b>Experience</b>—Twenty-five years of experience delivering high tech education and applying what we learn from the thousands of OpenVMS students we train annually.</li> <li>• <b>Classes specially designed for each member of your team</b>—From novice to experienced veteran; from system administrator to application developer.</li> </ul>

- **Variety of training methods**—Traditional instructor-led delivery at our education centers, your location, or using our online, remotely assisted instructor led (RAIL) training. We also offer customized learning solutions tailored to your particular needs.
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